This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. - 17. (Canceled).

18.   (Previously Presented) The medium of Claim 43 further comprising

(e)   program instructions selecting a Signal to Noise Ratio via the correlator as a threshold for reliable communication in the channel;

(f)   program instructions comparing the correlation value to the threshold; and

(g)   program instructions determining if the correlation value is above or below the threshold, where a correlation value below the threshold is indicative of unreliable transmission trough the channel.

19.   (Currently Amended) The medium of Claim 18 further comprising:

(h)   program instructions adjusting the carrier frequency to frequencies relevant for the transmission of the data signal, conditioned upon the correlation value being below the threshold; and

(i)   program instructions measuring the correlation value for each carrier frequency, where the correlation value vs. frequency is a measure for of the frequency dependent loss of the channel.

20.   (Currently Amended) The medium of Claim 43 18 further comprising:

(j)   program instructions adjusting the power level of the data signal to compensate for attenuation of the data signal.

21.   (Currently Amended) The medium of Claim ~~43~~ 18 further comprising:

(k)   program instructions altering the correlation value by adjusting either the PN code signal (f_0) or the carrier frequency (f_c).

22.   (Currently Amended) The medium of Claim ~~43~~ 18 further comprising:

(l)   program instructions adjusting the PN code length to compensate for a noisy environment.

23.   (Currently Amended) The medium of Claim ~~40~~ 43 further comprising:

(m)   program instructions modulating the PN code and/or the carrier and/or the PN modulated carrier with data signal.

24.   (Currently Amended) The medium of Claim ~~40~~ 43 further comprising:

(n)   program instructions determining the presence of an unreliable data transmission where the predetermined maximum ~~PN code length~~ correlator value does not exceed the threshold value.

25.   (Currently Amended) A method of dynamic measurement of a communication channel using a Direct Sequence Spread Spectrum (DSSS) communication system, comprising the steps of:

(a)   generating a Pseudo Noise (PN) code ($f_0 = 1/T$) having a length (l), where f_0 = PN code signal bandwidth, and T = ~~Chip~~ PN code signal chip rate;

(b)   modulating a carrier (cos. $2\pi f_c$) with the PN code, where f_c = Carrier frequency where the transmitter carrier frequency varies among a plurality of predetermined carrier frequencies;

(c)   modulating the PN coded carrier with a data signal as a PN coded data signal;

(d)   providing the PN coded data signal to a correlator via a communication channel for <u>extracting the PN code from the PN coded data signal</u> ~~determining transmission characteristics of the communication channel~~; and

(e)   determining a correlator value ~~for extracting the PN code from the PN coded data signal~~ via a power detector [,] <u>for determining a correlator value for each of the frequencies of the communication channel from the extracted PN code,</u> where the correlator value is a measure of attenuation loss of the communication channel.

26.   (Previously Presented) The method of Claim 25 further comprising the steps of:

(f)   selecting a Signal to Noise Ratio via the power detector as a threshold for reliable communication in the communication channel;

(g)   comparing the correlation value to the threshold in the power detector; and

(h)   determining if the correlation value is above or below the threshold via the power detector, where a correlation value below the threshold is indicative of unreliable transmission through the communication channel.

27.   (Currently Amended) The method of Claim 25 further comprising the steps of:

(f)   adjusting carrier frequencies (f_c) in step (b) to frequencies relevant for transmission of the <u>PN coded</u> data signal; and

(g)   measuring ~~the~~ <u>a</u> correlation value for each <u>respective</u> carrier frequency, where the correlation value vs. frequency is a measure of an attenuation loss of the <u>communication</u> channel.

28.   (Currently Amended) The method of Claim ~~25~~ <u>26</u> further comprising the step of:

(f)   adjusting a power level for the PN coded data signal to compensate for attenuation of ~~the~~ <u>a</u> transmitted data signal.

29.   (Currently Amended) The method of Claim ~~25~~ 26 further comprising the step of:

(f)   altering the correlation value in step (d) by adjusting <u>either</u> the PN code (f_0) or the carrier frequency (f_c).

30.   (Currently Amended) The method of Claim ~~25~~ 26 further comprising the step of:

(f)   adjusting the PN code length to compensate for a noisy environment on the communication channel.

31.   (Currently Amended) The method of Claim 25 ~~further comprising~~ wherein the step of [:] ~~(f)~~ modulating the PN coded carrier with the data signal <u>occurs before the carrier is modulated with the PN code</u>

32.   (Currently Amended) The method of Claim 25 further comprising the step of:

(f)   determining the presence of an unreliable data transmission where a predetermined maximum ~~PN code length~~ <u>correlator value</u> does not exceed a threshold value.

33.   (Currently Amended) The method of claim 25 further comprising ~~the step of~~:

(f)   wherein the step of providing the PN coded data signal ~~plus a channel noise signal~~ to the correlator via the communication channel <u>includes a channel noise signal</u> for determining transmission characteristics of the communication channel;

(g)   selecting a Signal to Noise Ratio as a threshold for reliable communication in the communication channel;

(h)   comparing ~~the~~ <u>a</u> correlation value of the PN code to the threshold value; and

(i)   wherein the step of determining ~~if the correlation variable is above or below the threshold, wherein,~~ a correlation value above the threshold is indicative of reliable transmission through the communication channel.

34.   (Currently Amended) A system of dynamic measurement of a communication
channel using a Direct Sequence Spread Spectrum (DSSS) communication system, comprising:

(a)   a code generating apparatus which generates a Pseudo Noise (PN) code signal (f_0
=1/T) having a length (l), where f_0 =PN <u>code</u> signal bandwidth, and T = ~~Chip~~ <u>PN code signal</u>
<u>chip</u> rate;

(b)   a carrier modulating apparatus which modulates a carrier (cos. $2\pi f_c$) with the PN
code where f_C = Carrier frequency;

(c)   a data modulating apparatus which modulates the PN coded carrier with a data
signal as a PN coded data signal;

(d)   a transmitter apparatus which transmits the PN coded data signal to a correlator
via a communication channel for determining transmission characteristics of the channel;

(e)   a frequency-controlling apparatus that tunes the carrier frequency to
predetermined frequencies relevant for the transmission of the <u>PN coded</u> data signal;

(f)   a synchronizing apparatus which determines a correlator value for each <u>of the</u>
<u>plurality of predetermined frequencies</u> ~~frequency for extracting the PN code from the PN coded~~
~~data signal~~; and

(g)   a power detector apparatus which keeps track of the correlator values and thereby
determines the attenuation loss of the communication channel.

35.   (Currently Amended) The system of claim ~~33~~ <u>34</u> wherein the power detector
apparatus selects a Signal to Noise Ratio as a threshold for reliable communication in the
communication channel, and determines if the correlation ~~variable~~ <u>value</u> is above or below the
threshold, where a correlation value below the threshold is indicative of unreliable transmission
through the communication channel and a correlator value above the threshold is indicative or
reliable transmission through the communication channel.

36.   (Currently Amended) The system of Claim ~~34~~ 35 wherein the power detector apparatus adjusts the power level of the data signal to compensate for attenuation of the transmitted data signal.

37.   (Currently Amended) The system of Claim ~~34~~ 35 wherein the correlation value is altered by adjusting <u>either</u> the chip rate of the PN code <u>signal</u> (f_0) or the carrier frequency (f_c).

38.   (Currently Amended) The system of Claim 34 wherein the length of the PN code <u>signal</u> is adjusted to compensate for a noisy environment.

39.   (Previously Presented) The system of Claim 34 wherein the presence of an unreliable data transmission is determined where a predetermined maximum ~~PN code signal length~~ <u>correlator value</u> does not exceed the threshold value.

40.   (Currently Amended) A system of dynamic measurement of a communication channel using Direct Sequence Spread Spectrum (DSSS) communication system, comprising:

(a)   a code generating apparatus which generates a Pseudo Noise (PN) code <u>signal</u> (f_0 =1/T) having a length (l), where f_0 =PN <u>code</u> signal bandwidth, and T = ~~Chip~~ PN code signal chip rate;

(b)   a carrier modulating apparatus which modulates a carrier (cos. $2\pi f_c$) with the PN code where f_C = Carrier frequency <u>where the carrier frequency varies among a plurality of predetermined carrier frequencies</u>;

(c)   a data modulating apparatus which modulates the PN coded carrier with a data signal as a PN coded data signal;

(d)   a transmitter apparatus which transmits the PN coded data signal to a correlator via a communication channel for determining transmission characteristics of the channel; and

(e)   power detecting apparatus which select a Signal to Noise Ratio as a threshold for reliable communication in the communication channel; determines a correlator value ~~for extracting the PN code from the PN coded data signal~~ [,]<u>for each of the frequencies of the communication channel from the extracted PN code,</u> and compares the correlation value of the

PN code to the threshold value to determine if the correlation value is above or below the threshold; where a correlation value below the threshold is indicative of unreliable transmission through the communication channel and a correlator value above the threshold is indicative of reliable transmission through the communication channel.

41.   (Currently Amended) A method of dynamic measurement of a communication channel using Direct Sequence Spread Spectrum (DSSS) communication system, comprising the steps of:

(a)   generating a Pseudo Noise (PN) code ($f_0=1/T$) having a length (l), where f_0 =PN code signal bandwidth, and T = Chip rate;

(b)   modulating a carrier (cos. $2\pi f_c$) with the PN code signal, where f_C = Carrier frequency where the carrier frequency varies among a plurality of predetermined carrier frequencies;

(c)   modulating the PN coded carrier with a data signal as a PN coded data signal;

(d)   providing the PN coded data signal to a correlator via a communication channel for determining transmission characteristics of the communication channel;

(e)   determining a correlator value from the PN coded data signal;

(e)(f)   selecting a Signal to Noise Ratio as a threshold via a power detecting apparatus for:

(i)   determining a correlator value for extracting the PN code from the coded data signal;

(g)(ii)   comparing the correlation value of the PN code to the threshold value; and

(h)(iii)   determining if the correlation variable value for each of the frequencies of the communication channel from the extracted PN code is above or below the threshold, where the correlator value is a measure of attenuation loss of the communication channel, where a

correlation value below the threshold is indicative of unreliable transmission through the communication channel and a correlator value above the threshold is indicative of reliable transmission through the communication channel.

42.   (Currently Amended) A system of dynamic measurement of a communication channel using Direct Sequence Spread Spectrum (DSSS) communication system, comprising:

(a)   a code generating apparatus which generates a Pseudo Noise (PN) code <u>signal</u> (f_0 =1/T) having a length (l), where f_0 =PN <u>code</u> signal bandwidth, and T = ~~Chip~~ <u>PN code signal</u> <u>chip</u> rate;

(b)   a carrier modulating apparatus which modulates a carrier (cos. $2\pi f_c$) with the PN code where f_C = Carrier frequency<u> where the carrier frequency varies among a plurality of</u> <u>predetermined carrier frequencies</u>;

(c)   a data modulating apparatus which modulates the PN coded carrier <u>signal</u> with a data signal as a PN coded data signal;

(d)   a transmitter apparatus which transmits the PN coded data signal to a correlator via a communication channel for determining transmission characteristics of the channel;

(e)   <u>a correlator apparatus to determine a correlator value from the PN coded data</u> <u>signal;</u>

<u>(f)</u>~~(e)~~   a ~~selecting apparatus via~~ power detecting apparatus which select a Signal to Noise Ratio as a threshold for reliable communication in the channel ~~to;~~ <u>and</u>

~~determine a correlator value for extracting the PN code from the PN coded data signal;~~

<u>(g)</u>~~(ii)~~ <u>a comparing apparatus to compare</u> the correlation value ~~of the PN code~~ to the threshold value;~~and~~.

<u>(h)</u>~~(ii)~~ determine if the correlation value <u>for each of the frequencies of the</u> <u>communication channel from the extracted PN code</u> is above or below the threshold; where a correlation value below the threshold is indicative of unreliable transmission through the

communication channel and a correlator value above the threshold is indicative of reliable transmission through the communication channel.

43.   (Currently Amended) A medium, executable on a computer system for dynamic measurement of a communication channel using a Direct Sequence Spread Spectrum (DSSS) communication system, comprising:

(a)   program instructions for generating a Pseudo Noise (PN) code <u>signal</u> (f_0=1/T) having a length (l), where f_0 =PN <u>code</u> signal bandwidth, and T = ~~Chip~~ <u>PN code signal chip</u> rate;

(b)   program instructions for modulating a carrier (cos. $2\pi f_c$) with the PN code, where f_C = Carrier frequency and <u>the carrier frequency varies among a plurality of predetermined carrier frequencies</u>;

(c)   program code for modulating the PN coded carrier with a data signal as a PN coded data signal;

(d)   program instructions for providing the PN coded data signal to a correlator via a communication channel for determining transmission characteristics of the communication channel; and

(e)   program instructions for determining a correlator value <u>for each of the frequencies of the communication channel from the extracted PN code</u> ~~for extracting the PN code from the PN coded data signal~~, where the correlator value is measure of attenuation loss of the communication channel.